



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 7
25 FUNSTON ROAD
KANSAS CITY KANSAS 66115

0782

Site Barnes Residence
ID #ADD960966410
Break 1 2
Other E&E
8-12-86

DATE August 12, 1986

MEMORANDUM

SUBJECT ~~Town and Country Markets~~, Paytown, Missouri

FROM Charles P Hensley *CPH*
Chief, EP&R/ENSV

TO ☒ Robert L Morby
Chief, SPFD/WSTM

Attached for your review is

- ☐ Data Transmittal
- ☐ Work Plan
- ☒ Trip Report
- ☐ Preliminary Assessment
- ☐ HRS Form with Supporting Documentation
- ☐ Final Report of Site Investigation
- ☐

If you have any questions or comments, please contact Paul ☒ Doherty
at 236-3888

Attachments

- cc ☐ E&E
☐ LABO
☐ EP&R
☐ TOPE
☐ RCRA
☐ SPFD
☐ EMCM
☐

John C Wicklund
John C Wicklund
Director, ENSV



sent
AUG 13 1986



ecology and environment, inc.

FAIRWAY WEST OFFICE BLDG 4350 JOHNSON DRIVE SHAWNEE MISSION KANSAS 66205 TEL 913-432 9961

International Specialists in the Environment

MEMORANDUM

TO Paul Doherty, ARPO

FROM Clark Gunion, REM/FIT

DATE August 8, 1986

SUBJECT Trip Report for the site investigation of the Town and Country Market in Raytown, Missouri
TDD #R-07-8604-11

INTRODUCTION

The Ecology and Environment Field Investigation Team (E&E/FIT) was tasked by the Region VII office of the U S Environmental Protection Agency (EPA) to perform a site investigation of the Town and Country Market located at 9080 East 350 Highway in Raytown, Missouri (Figure 1). The task was requested after the EPA received a citizen complaint about the foul odor from water leaking into the citizen's basement (Barnes residence). The citizen's residence is located approximately 150 feet downgradient of the Town & Country Market. EPA response personnel visited the residence and collected samples during May of 1985. Trace concentrations of 44 organic compounds were detected in the water and soil. All of the compounds detected were aliphatic or cyclic hydrocarbons derived from petroleum or coal sources.

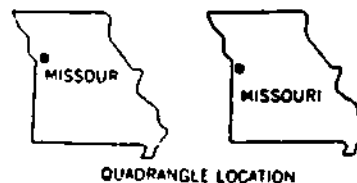
The Town & Country Market dispenses gasoline from two 10,000 gallon underground tanks. There are also reports that a previous occupant of the Town & Country site operated a service station and had used an old septic tank for disposal of waste oil. The EPA suspected that leakage from the 10,000 gallon storage tanks or the septic tank may be occurring and causing the odor.

E&E/FIT visited the site during the week of June 30 - July 4 and conducted a soil gas survey for the purpose of detecting subsurface contamination from a hydrocarbon source.

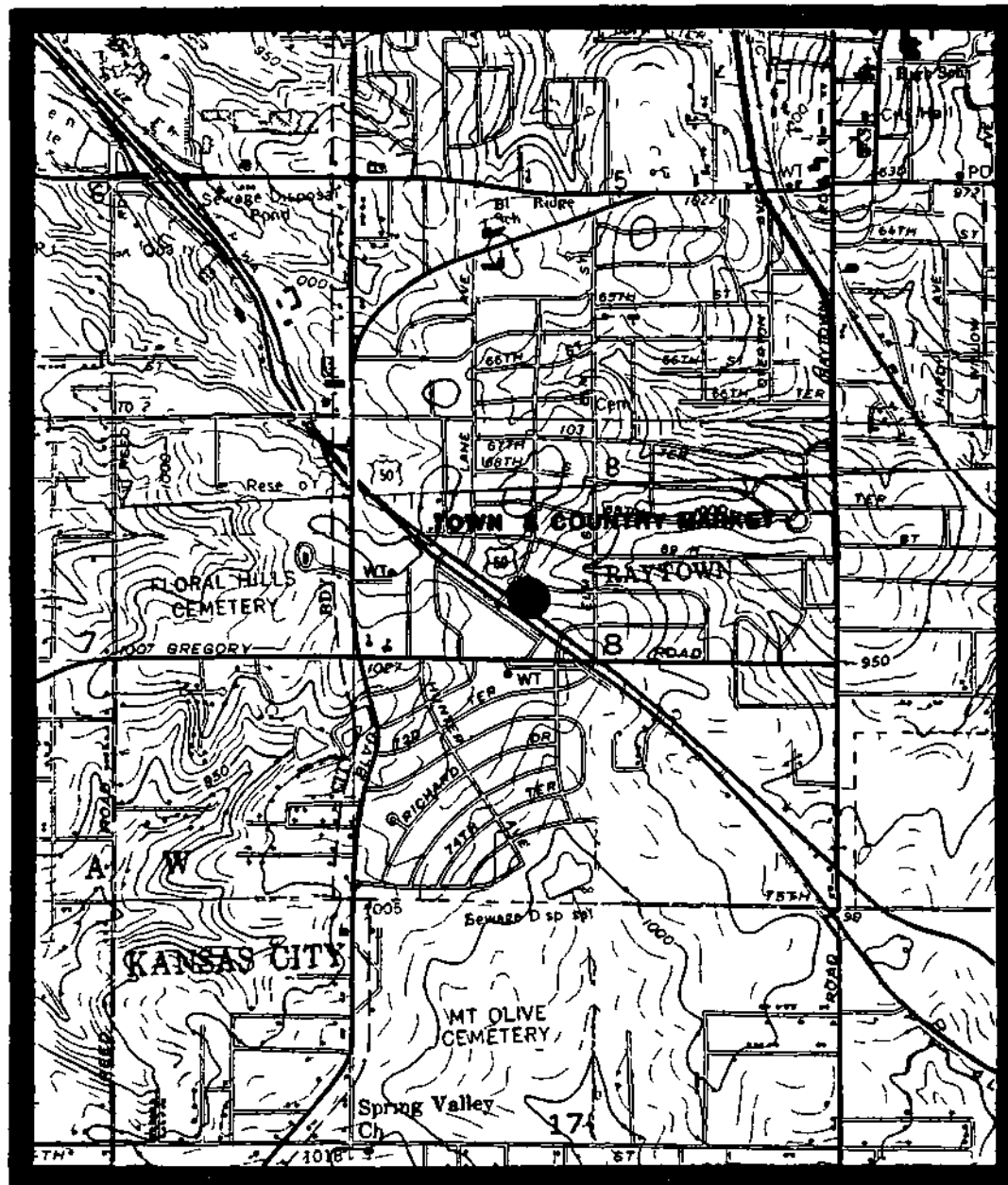
FIELD WORK

The Work Plan for Town & Country Market (TDD # R-07-8604-11) provides more complete information on background, environmental setting, and soil gas procedures.

INDEPENDENCE QUADRANGLE
MISSOURI
7 5 MINUTE SERIES (TOPOGRAPHIC)
LEES SUMMIT QUADRANGLE
MISSOURI—JACKSON CO
7 5 MINUTE SERIES (TOPOGRAPHIC)

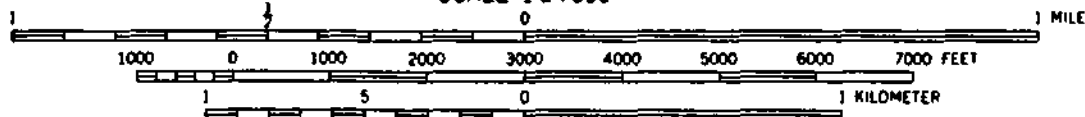


QUADRANGLE LOCATION



N

SCALE 1:24,000



CONTOUR INTERVAL 10 FEET

FIGURE 1

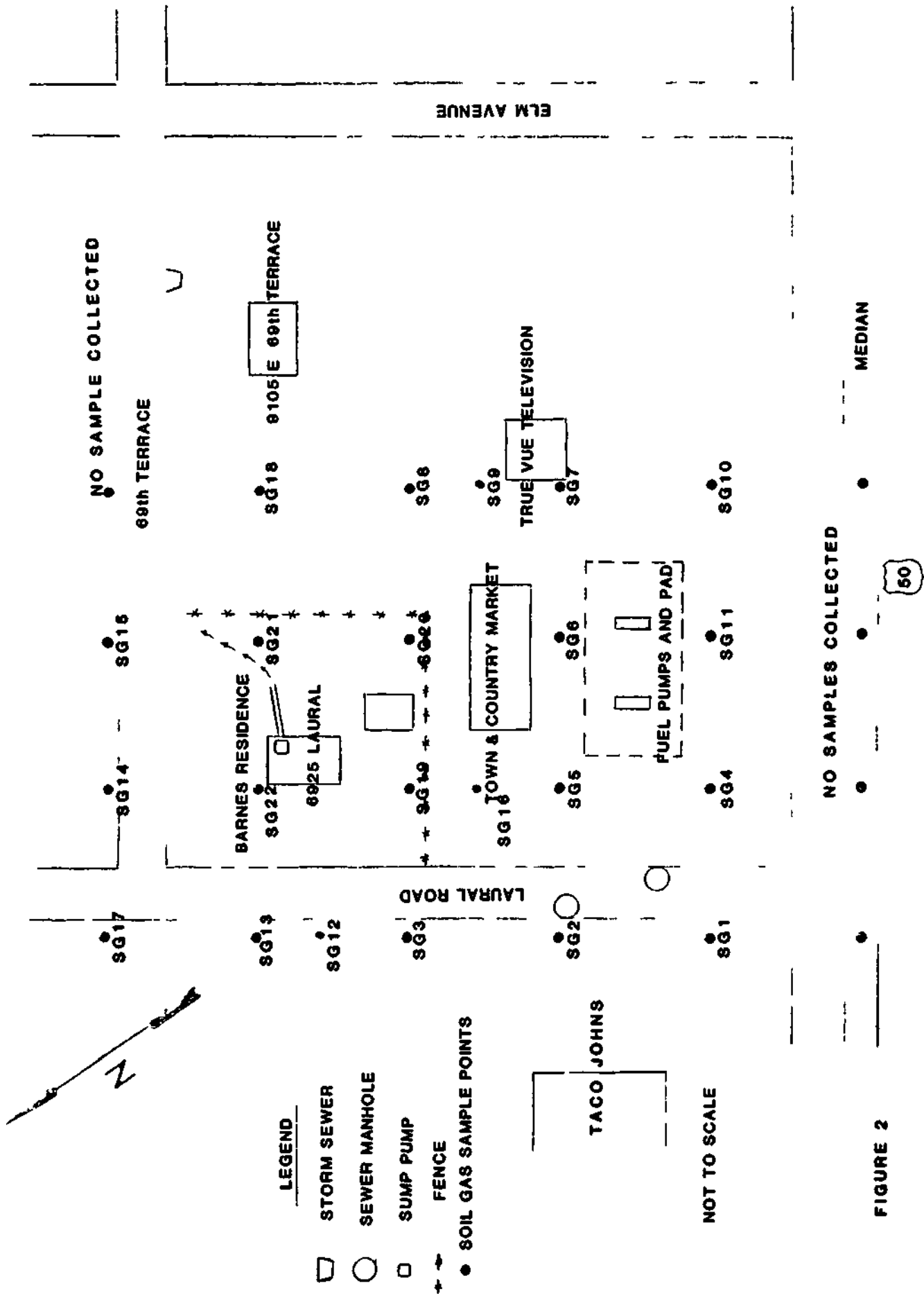
Prior to the soil gas survey, local utilities were contacted and asked to locate any underground lines in the area. Underground natural gas and water lines were located and marked with yellow and blue spray paints, respectively. There were no underground telephone or electric power lines in the area. A grid pattern was plotted over the area which included 22 sampling points (See Figure 2). The equipment utilized on-site included a FIT van set up with the AID-Gas Chromatograph for sample analysis and a drill rig, type CME-45, used for sample probe insertion and drilling through asphalt covered areas. Regular gasoline from Town & Country's pump was used as the internal standard for sample comparison. Project time constraints precluded obtaining and preparing a waste oil standard. Hollow steel probes were inserted into the ground approximately eight feet for soil gas extraction. The drill rig was used for probe insertion in accessible areas. Eighteen of the 22 sample points were accessible to the drill rig. The remaining four sample points were not accessible and manual probe insertion was necessary. Four soil samples were proposed in the Town & Country work plan but were not collected during the field work.

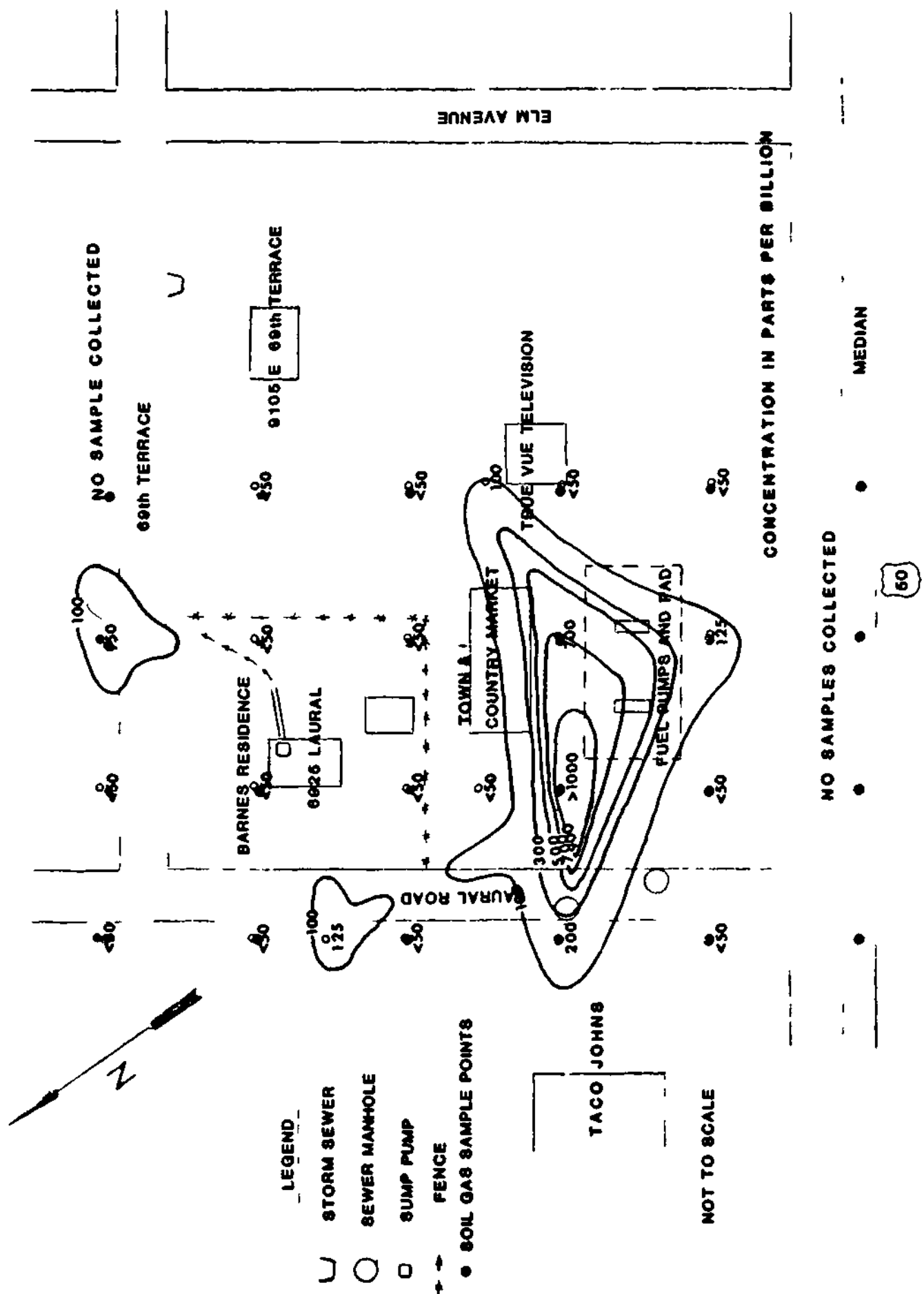
The soil samples were proposed as a corollary to the proficiency of the AID-GC. These soil samples were not collected because the turn-around time for the GC field analysis proved to be longer than expected and on-site project time was limited. Also, proposed in the work plan were four sample points in the median of 350 Highway. Probes were not inserted in the median due to the presence of a large water main not accurately marked by the water department. An additional sample point on the east corner of the grid was not sampled because access could not be obtained.

Figure 3 displays concentration contours for leaded gasoline in parts per billion. A contaminant plume centered around the Town & Country Market is in evidence with a peak of over 1000 parts per billion leaded gasoline. Two smaller plumes are shown downgradient of the market. These may be transitory remnants of previous contaminant migration episodes. Table 1 gives a general location description and concentration values for the 22 soil gas samples.

CONCLUSIONS/RECOMMENDATIONS

The soil gas data collected during this site investigation seems to indicate a contaminant source emanating from the Town & Country Market site. The 10,000 gallon tanks were installed in 1979 and are likely candidates for the source of leakage since the standard used for comparison was regular gasoline from the Town & Country pump. In order to check the leakage potential of the septic tank, two options should be considered. (1) a sample of waste oil could be collected from an existing source i.e., an auto service establishment, and compared with the AID data collected at this site or (2) collect an





APPROXIMATE LOCATION OF RICHARDS FLYING FIELD

FIGURE 3

Table 1

Summary of Soil Gas Sampling
For Town & Country Market Site
July 2 and 3, 1986

Soil Gas Sample #	Location	Petroleum Product Concentration (ppb)
SG 1	Taco John parking lot	< 50
SG 2	Taco John parking lot	200
SG 3	Taco John parking lot	< 50
SG 4	Town & Country parking lot	< 50
SG 5	Town & Country parking lot	>1000
SG 6	Town & Country parking lot	700
SG 7	True Vue Television parking lot	< 50
SG 8	True Vue Television parking lot	100
SG 9	True Vue Television parking lot	< 50
SG 10	True Vue Television parking lot	< 50
SG 11	Town & Country Parking lot	125
SG 12	Kinman Property	125
SG 13	Kinman Property	< 50
SG 14	Simpson Property	< 50
SG 15	Simpson Property	150
SG 16	Town & Country parking lot	< 50
SG 17	Kamp Property	< 50
SG 18	Crowley Property	< 50
SG 19	Barnes Property	< 50
SG 20	Barnes Property	< 50
SG 21	Barnes Property	< 50
SG 22	Barnes Property	< 50

Town & Country Market
Raytown, Missouri
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air sample from the basement where the odor was first detected if the odor returns and compare with AID data

Due to the fact that soil gas positive values for petroleum product contamination were recorded on each grid border, a wider grid pattern should be considered. Additional sampling points outside of the existing grid pattern should leave no question as to the source of petroleum product contamination.